



### Area of use\*



LIGHT INDUSTRY



FINISHINGS



MAINTENANCE



TRANSPORT



LOGISTICS

### Technical features

**Support:** polyamide, seamless knitted.

**Gauge:** 18.

**Wrist:** elastic knit with piping.

**Coating:** polyurethane, coated on palm.

**Colour:** black and blue.

**Sizes:** 7 to 10.

**Packaging:** carton of 100 pairs.

**Subpackaging:** bag of 10 pairs.



### Advantages

- > **Non-irritating and easy to adjust** with the seamless knitted support.
- > **Increased sensitivity** thanks to the fineness of the gauge.
- > **Back of the hand ventilated** thanks to the only palm coating.
- > **Quality and reliability** of ISO 9001 / ISO 14001 certified production.
- > **Screen touch gloves.**
- > **Antibacterial** with Sanitized® treatment.



### Certification

This product complies with **European Regulation (EU) 2016/425** on Personal Protective Equipment (PPE). **Category II.**

Issued by **SATRA**, notified body n°2777.

EN 388 : 2016 + A1 : 2018



3121X

EN ISO 21420 : 2020



Download the EU declaration of conformity on <http://docs.singer.fr>

## EN ISO 21420 - PROTECTIVE GLOVES

General requirements and test methods. This standard specifies the essential requirements for ergonomics, safety, marking, information and instructions for use.

## EN 388 - AGAINST MECHANICAL RISKS



1.2.3.4.F.P

|          |   |
|----------|---|
| <b>1</b> | Abrasion resistance. Level 1 to 4 (4 being the best).                         |
| <b>2</b> | Blade cut resistance. Level 1 to 5 (5 being the best).                        |
| <b>3</b> | Tear resistance. Level 1 to 4 (4 being the best).                             |
| <b>4</b> | Puncture resistance. Level 1 to 4 (4 being the best).                         |
| <b>F</b> | Cut resistance (ISO13997). Level A to F (F being the best).                   |
| <b>P</b> | Resistance against impact (according to EN 13594). Marking P (optional test). |

For gloves that contain materials which can gets dulls to the blade, and additional compulsory test must be performed according to EN ISO 13997 test method (TDM 100 tester).  
This test may also be optional for gloves that do not dull the blade.

## EN 374 - AGAINST CHEMICALS



Type X  
X.X.X

Type A

Breakthrough time  $\geq$  30 min for at least 6 chemicals of the list (see below)

Type B

Breakthrough time  $\geq$  30 min for at least 3 chemicals of the list (see below)

Type C

Breakthrough time  $\geq$  10 min for at least 1 chemical of the list (see below)

|          |                            |           |                                     |
|----------|----------------------------|-----------|-------------------------------------|
| <b>A</b> | Methanol                   | 67-56-1   | Primary alcohol                     |
| <b>B</b> | Acetone                    | 67-64-1   | Ketone                              |
| <b>C</b> | Acetonitrile               | 75-05-8   | Nitrile composite                   |
| <b>D</b> | Dichloromethane            | 75-09-2   | Chlorinated hydrocarbon             |
| <b>E</b> | Carbone Disulphide         | 75-15-0   | Organic compound containing Sulphur |
| <b>F</b> | Toluene                    | 108-88-3  | Aromatic hydrocarbon                |
| <b>G</b> | Diethylamine               | 109-89-7  | Amine                               |
| <b>H</b> | Tetrahydrofuranne          | 109-99-9  | Heterocyclic Ether                  |
| <b>I</b> | Ethyl acetate              | 141-78-6  | Ester                               |
| <b>J</b> | n-Heptane                  | 142-82-5  | Saturated Hydrocarbon               |
| <b>K</b> | Sodium hydroxide 40%       | 1310-73-2 | Inorganic base                      |
| <b>L</b> | Sulphuric acid 96%         | 7664-93-9 | Inorganic mineral acid, oxidising   |
| <b>M</b> | Nitric acid (65 $\pm$ 3) % | 7697-37-2 | Inorganic mineral acid              |
| <b>N</b> | Acetic acid (99 $\pm$ 1) % | 64-19-7   | Organic acid                        |
| <b>O</b> | Ammonia 25%                | 1336-21-6 | Organic base                        |
| <b>P</b> | Hydrogen peroxid 30%       | 7722-84-1 | Peroxide                            |
| <b>S</b> | Hydrofluoric acid 40%      | 7664-39-3 | Inorganic mineral acid              |
| <b>T</b> | Formaldehyde 37%           | 50-00-0   | Aldehyde                            |

|          |                                  |
|----------|----------------------------------|
| Classe 1 | Breakthrough time: > 10 minutes  |
| Classe 2 | Breakthrough time: > 30 minutes  |
| Classe 3 | Breakthrough time: > 60 minutes  |
| Classe 4 | Breakthrough time: > 120 minutes |
| Classe 5 | Breakthrough time: > 240 minutes |
| Classe 6 | Breakthrough time: > 480 minutes |

## ASTM F2878 - PUNCTURE RESISTANCE TO AN HYPODERMIC NEEDLE



Level X

|                |  |
|----------------|--|
| <b>Level 1</b> | Puncture resistance with a less or an equal force to 2 N.  |
| <b>Level 2</b> | Puncture resistance with a less or an equal force to 4 N.  |
| <b>Level 3</b> | Puncture resistance with a less or an equal force to 6 N.  |
| <b>Level 4</b> | Puncture resistance with a less or an equal force to 8 N.  |
| <b>Level 5</b> | Puncture resistance with a less or an equal force to 10 N. |

## EN 374-5 - AGAINST MICRO-ORGANISMS



VIRUS

Protection against bacteries and fungi

VIRUS = with additional permeation test to virus (ISO16604)

## EN 511 - AGAINST THE COLD



A.B.C

**A**

Convective cold. Level 0 to 4 (4 being the best).

**B**

Contact cold. Level 0 to 4 (4 being the best).

**C**

Waterproofness. Level 0 (No) or 1 (Yes).

## EN 407 - AGAINST THERMAL RISKS (HEAT AND/OR FIRE)

Protection against fire:



A.B.C.D.E.F

Protection against heat:



X.B'.C.D.E.F  
(\*) Max: Level 2

**A**

Burning behaviour. Level 1 to 4 (4 being the best).

**B**

Contact heat (threshold time  $\geq$  15 s). Level 1 to 4 (4 being the best).  
1= 100°C / 2= 250°C / 3= 350°C / 4= 500°C

**C**

Convective heat. Level 1 to 4 (4 being the best).

**D**

Radiant heat. Level 1 to 4 (4 being the best).

**E**

Small splashes of molten metal. Level 1 to 4 (4 being the best).

**F**

Large splashes of molten metal. Level 1 to 4 (4 being the best).

## EN 12477 + A1 - FOR WELDERS

**Type A**

More general welding and cutting operations

**Type B**

Higher dexterity for TIG welding

## ISO 18889 - PESTICIDE HANDLING



X

**G1**

Low potential risk. Diluted pesticides.  
Without mechanical resistance.

**G2**

Medium potential risk. Diluted or concentrated pesticides.  
Minimum mechanical resistance.

**GR**

Palm protection only.  
Dry residues of pesticides.

## EN ISO 10819 - VIBRATION AND MECHANICAL SHOCKS

Hand-arm vibration. Measurement and evaluation  
of the vibration transmissibility from gloves to the palm of the hand.

## EN 16350 - ELECTROSTATIC PROPERTIES



Each individual measurement shall satisfy:  
the vertical resistance requirement:  $R_v < 1,0 \times 10^8 \Omega$ .  
Test method according to EN 1149-2: 1997.

## EN 60903 - MAXIMAL TENSION OF USE



| AC       | DC       | Class |
|----------|----------|-------|
| 750 V    | 500 V    | 00    |
| 1 500 V  | 1 000 V  | 0     |
| 11 250 V | 7 500 V  | 1     |
| 25 500 V | 17 000 V | 2     |
| 39 750 V | 26 500 V | 3     |
| 54 000 V | 36 000 V | 4     |

"X" means that the glove has not been submitted to the test.